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IN THE UNITED STATES PATENT AND TRADEMARK OF CE

Application of: Michael L. Boyer II et al.

Application No.: 09/927,334

Filed: August 13, 2001

For: IMPLANTS FORMED WITH

DEMINERALIZED BONE

Group Art Unit: 3738

Examiner: Unassigned

Attorney Docket No.: 8932-543

## INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Pursuant to Applicants' duty of disclosure under 37 C.F.R. § 1.56, Applicants hereby invite the Examiner's attention to the <u>83</u> references listed on the enclosed revised Form PTO-1449, copies of which are provided herewith.

Applicants respectfully request that the Examiner review all of the references and make them of record in the present application by completing and returning the enclosed revised Form PTO-1449.

No fee is believed to be due for this submission, since this Information Disclosure Statement is being submitted before the first office action. Should any fees be required, however, please charge the required fees to Pennie & Edmonds Deposit Account No. 16-1150.

Seth A. Watkins

Respectfully submitted,

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For:

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**Enclosures** 

Date May 8, 2002

O I EIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO. 8932-543 APPLICANT M. Boyer II et al. FILING DATE

August 13, 2001

Sys Thin	rage of	<i>-</i>	U.S	S. PATENT DOCUMENTS	10		
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME .	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	US 2001/0014831 A1	08/2001	Scarborough	623	23.51	
	АВ	US, 2001/0014667 A1	08/2001	Chen et al.	514	12	
	AC	US 2001/0010021 A1	07/2001	Boyd et al.	623	17.13	
	AD	6,277,397 B1	08/2001	Shimizu	424	443	
	AE	6,206,923,B1	03/2001	Boyd et al.	623	17.11	
	AF	6,200,347 B1	03/2001	Anderson et al.	623	16.11	
	AG	6,143,030	11/2000	Schroder	623	16.11	
	AH	6,123,731	09/2000	Boyce et al.	623	23.63	
	Al	6,110,482	08/2000	Khouri et al.	424	423	
	AJ	6,090,998	07/2000	Grooms et al.	623	16	
	AK	6,060,640	05/2000	Pauley et al.	623	11	
	AL	6,049,025	04/2000	Stone et al.	623	16	
	АМ	6,045,554	04/2000	Grooms et al.	606	73	_
	AN	6,030,635	02/2000	Gertzman et al.	424	423	
	AO	6,013,853	01/2000	Athanasiou et al.	623	11	
	AP	5,997,581	12/1999	Khalili	623	23	
	AQ	5,981,828	11/1999	Nelson et al.	623	16	
·	AR	5,972,034	10/1999	Hofmann et al.	623	23	
	AS	5,968,047	10/1999	Reed	606	76	
	AT	5,910,315	06/1999	Stevenson et al.	424	422	
	AU	5,904,716	05/1999	Gendler	623	11	
	AV	5,899,939	05/1999	Boyce et al.	623	16	
	AW	5,888,219	03/1999	Bonutti	623	11	
	AX	5,879,403	03/1999	Ostiguy et al.	623_	22	
	AY	5,876,455	03/1999	Harwin	623	16	
	ΑZ	5,876,452	03/1999	Athanasiou et al.	623	16	
	ВА	5,868,749	02/1999	Reed	606	76	
	вв	5,824,084	10/1998	Muschler	623	16	
	вс	5,824,078	10/1998	Nelson et al.	623	66	
	BD	5,733,288	03/1998	Allen	606	79	
	BE	5,728,159	03/1998	Stroever et al.	623	16	
	BF	5,728,157	03/1998	Prescott	623	.11	

Sheet 2 of 3

ſ				U.S. PATENT DOCUMENTS			CLASS - SUBCLASS   FILING DATE   FABRICATE   FILING DATE   FABRICATE   FABRICA				
	EXAMINER		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCEASS	FILING DATE			
Q	IP	BG	5,725,813	03/1998	Nies	264	15 ENTE	Hain			
أمد	, , , ,	ВН	5,697,981	12/1997	Ison et al.	OBS SOLO	16				
" [	8 2002 8	BI	5,665,120	09/1997	Ohtsuka et al.	623	16				
أنرجز	EMAJON PERIE	вл	5,607,474	03/1997	Athanasiou et al.	623	11				
		вк	5,569,308	11/1996	Sottosanti	623	165				
ſ		BL	5,556,430	09/1996	Gendler	623	16				
Ī		вм	5,545,222	08/1996	Bonutti	623	11				
		BN	5,507,813	04/1996	Dowd et al.	623	16				
		во	5,501,706	03/1996	Arenberg	623	16				
	,	ВР	5,464,439	11/1995	Gendler	623	16				
		BQ	5,439,684	08/1995	Prewett et al.	424	422				
ſ		BR	5,425,770	06/1995	Piez et al.	623	16				
		BS	5,403,317	04/1995	Bonutti	606	80				
		BT	5,366,508	11/1994	Brekke	623	16				
		BU	5,329,846	07/1994	Bonutti	100	50				
		BV	5,314,476	05/1994	Prewett et al.	623	16				
		BW	5,306,304	04/1994	Gendler	623	16				
		вх	5,298,254	03/1994	Prewett et al.	424	422				
		BY	5,284,655	02/1994	Bogdansky et al.	424	422	y <del></del> .			
		BZ	5,133,755	07/1992	Brekke	623	16				
		CA	5,092,887	03/1992	Gendler	623	13				
		СВ	5,053,049	10/1991	Campbell	623	16				
		cc	4,994,084	02/1991	Brennan	623	11				
		CD	4,950,295	08/1990	Weigum et al.	623	16				
		CE	4,627,853	12/1986	Campbell et al.	623	16				
		CF	4,430,760	02/1984	Smestad	3	1.9				
		CG	2,621,145	12/1952	Sano	167	84				
				FORE	IGN PATENT DOCUMENTS						
			DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION  YES NO 'abstract only			
		СН	FR 2 645 748	10/1990	France			X*			
		CI	DE 29 10 627 A1	09/1980	Germany			X*			
Ì		CJ	SU 1465040 A1	03/1989	Soviet Union			X*			
Ì		СК	WO 00/40179	07/2000	PCT			х			
		CL	WO 00/40177	07/2000	PCT			х			
		СМ	WO 00/30568	06/2000	PCT			x			

	1	M O 8 TOOL OF									
	1 3w	E .	FOREIGN PATENT DOCUMENTS			JEV					
/	Acar	DOCUMENT NUMBER	DATE	COUNT	TRY CEN	CLASS	SUBCLASS	TRANS	LATION		
		, of later in		į	REU	2002	200	YES abstract only	NO		
	ÉИ	WO 00/07528	02/2000	PCT	RECE!	_W	Y Kis,	Х			
	co/	WO 00/07527	02/2000	PCT	,	3400		_ X_			
	СР	WO 99/38461	08/1999	PCT	TECHNO			х			
			·								
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)											
	CQ	Kai-Uwe Lewandrowski, "Improvement of Incorporation of Bone Allografts," CRISP grant abstract, Fiscal Year 2000.									
	CR	Joseph Catanese III et al., "Heterogeneity of the mechanical properties of demineralized bone," Journal of Biomechanics, Vol. 32, pp. 1365-1369, 1999.									
	cs		Kai-Uwe Lewandrowski et al., "Mechanical Properties of Perforated and Partially Demineralized Bone Grafts," Clinical Orthopaedics and Related Research, No. 353, pp. 238-246, 1998.								
	СТ	Kai-Uwe Lewandrowski et al., "Improved Osteoinduction of Cortical Bone Allografts: A Study of the Effects of Laser Perforation and Partial Demineralization," <i>Journal of Orthopaedic Research</i> , Vol. 15, pp. 748-756, 1997.									
	CU 1	Kai-Uwe Lewandrowski et al., "Kinetics of cortical bone demineralization: Controlled demineralization - a /new method for modifying cortical bone allografts," <i>Journal of Biomedical Materials Research</i> , Vol. 31, pp. 365-372, 1996.									
	cv	Douglas W. Jackson et al., "Biologic Remodeling after Anterior Cruciate Ligament Reconstruction Using a Collagen Matrix Derived from Demineralized Bone," <i>American Journal of Sports Medicine</i> , Vol. 24, pp. 405-414, 1996.									
	cw ,	/Kai-Uwe Lewandrowski et al., "Flexural Rigidity in Partially Demineralized Diaphyseal Bone Grafts," <i>Clinical Orthopaedics and Related Research</i> , No. 317, pp. 254-262, 1995.									
	cx ,	J.J. Broz et al., "Material and Compositional Properties of Selectively Demineralized Cortical Bone," <i>J. Biomechanics</i> , Vol. 28, pp. 1357-1368, 1995.									
	CY i	Howard S. An et al., "Comparison Between Allograft Plus Demineralized Bone Matrix Versus Autograft in Anterior Cervical Fusion. A Prospective Multicenter Study," SPINE, Vol. 20, pp. 2211-2216, 1995.									
	CZ :	Norbert Kübler et al., "Osteoinductive, Morphologic, and Biomechanical Properties of Autolyzed, Antigen-Extracted, Allogeneic Human Bone," <i>J. Oral Maxillofac. Surg.</i> , Vol. 51, pp. 1346-1357, 1993.									
	DA ,	/S. M. Tuli et al., "The Osteoinductive Property of Decalcified Bone Matrix. An Experimental Study," <i>The Journal of Bone and Joint Surgery</i> , Vol. 60-B, pp. 116-123, 1978.									
	DB	Marshall R. Urist, "Surface-Decalcified Allogeneic Bone (SDAB) Implants. A Preliminary Report of 10 Cases and 25 Comparable Operations With Undecalcified Lyophilized Bone Implants.," <i>Clinical Orthopaedics and Related Research</i> , No. 56, pp. 37-50, 1968.									
	DC \	Fred H. Albee, <i>Bone Graft Surgery in Disease, Injury and Deformity</i> , D. Appleton-Century Company, Inc., New York, 1940, pp. 30, 65-67, 114, 151, 155, 164, 212, 256-257, 270-273, 311-313.									
	DD	Fred H. Albee, "Bone Surgery With Machine Tools," Scientific American, April, 1936, pp. 178-181.									
	DE	Fred H. Albee, <i>Bone-Graft Surgery</i> , W. B. Saunders Company, Philadelphia, Pennsylvania, 1915, pp. 90-92, 145, 165-166, 171, 368-369.									
							-	$\overline{}$			

**EXAMINER** 

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.